

SAN JOAQUIN VALLEY UNIFIED AIR POLLUTION CONTROL DISTRICT

**RULE 4308 BOILERS, STEAM GENERATORS, AND PROCESS HEATERS - 0.075  
MMBtu/hr to 2.0 MMBtu/hr**

*(Adopted October 20, 2005)*

1.0 Purpose

The purpose of this rule is to limit emissions of oxides of nitrogen (NO<sub>x</sub>) from boilers, steam generators, process heaters and water heaters.

2.0 Applicability

This rule applies to any person who supplies, sells, offers for sale, installs, or solicits the installation of any new small boiler, steam generator, process heater or water heater with a rated heat input capacity greater than or equal to 75,000 British thermal units per hour and up to but not including 2,000,000 British thermal units per hour.

3.0 Definitions

- 3.1 APCO: the Air Pollution Control Officer of the San Joaquin Valley Unified Air Pollution Control District, or any person authorized to act on behalf of the APCO.
- 3.2 Boiler or Water Heater: any external combustion equipment fired with any liquid or gaseous fuel to produce hot water or steam.
- 3.3 British Thermal Unit (Btu): the amount of heat required to raise the temperature of one pound of water from 59° F to 60° F at one atmosphere.
- 3.4 District: as defined in Rule 1020 (Definitions).
- 3.5 Heat Output: the enthalpy of the working fluid output of the unit.
- 3.6 Higher Heating Value (hhv): the total heat liberated per mass of fuel burned (Btu per pound), when fuel and dry air at standard conditions undergo complete combustion and all resulting products are brought to their standard states at standard conditions.
- 3.7 Humidifier: a device or system that uses an air stream heated by a direct contact combustion process in combination with a water spray to produce warm air of high humidity in order to maintain or increase the moisture content of the material being processed or conveyed by the air stream.
- 3.8 Manufactured Home: as defined in 42 United States Code Section 5402 and California Health and Safety Code Section 18007.

- 3.9 NOx Emissions: the sum of oxides of nitrogen (NOx) in the flue gas, collectively expressed as nitrogen dioxide.
- 3.10 Process Heater: any combustion equipment fired on gaseous or liquid fuel, which transfers heat from combustion gases to water or process streams. Process heaters exclude kilns or ovens used for drying, baking, cooking, calcining, heat treating or vitrifying.

3.11 Unit: any boiler, process heater, or water heater as defined in this rule.

#### 4.0 Exemptions

The provisions of this rule shall not apply to:

- 4.1 Units installed in manufactured homes and
- 4.2 Humidifiers, where the products of combustion come into direct contact with the material to be heated.

#### 5.0 Requirements

- 5.1 A person shall not supply, sell, offer for sale, install or solicit the installation of any boiler, process heater or water heater unless it has certified emissions complying with Table 1.0:

Table 1.0

Boiler/Heater Size Heat Input Capacity (MMBtu/hr)	NOx Limit	CO Limit
Greater than or equal to 0.075 MMBtu/hr but less than or equal to 0.4 MMBtu/hr	0.093 lbs of NOx/MMBtu of heat output at 3% stack gas oxygen by volume on a dry basis.	Not Applicable.
Greater than 0.4 MMBtu/hr but less than 2.0 MMBtu/hr	0.036 lbs of NOx/MMBtu of heat input at 3% stack gas oxygen by volume on a dry basis.	400 ppm at 3% stack gas oxygen by volume on a dry basis.

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## 6.0 Administrative Requirements

### 6.1 Emission Certification

6.1.1 Certified emissions levels shall be demonstrated by an emission certification approved under either of the following:

6.1.1.1 The District's certification program as described in Section 6.2 of this rule.

6.1.1.2 The South Coast Air Quality Management District Certification List for Rule 1146.2.

6.1.1.3 Other emission certification programs approved by the EPA and APCO.

### 6.2 District Certification Program

6.2.1 For each model to be certified, the manufacturer shall obtain from an independent testing laboratory, a certification source test verifying compliance with the emission limits in Section 5.0. The results should be submitted with the compliance report information in Section 6.3.

6.2.2 Source tests shall be conducted on a randomly selected unit no more than 90 days prior to the date of proposed certification of the model by the District.

6.2.3 Tests shall be conducted and reports shall be prepared according to the "Nitrogen Oxides Emissions Compliance Testing for Natural Gas-Fired Water Heaters and Small Boilers," Protocol, South Coast Air Quality Management District, Source Testing and Engineering Branch, Applied Science and Technology.

6.2.4 District certification shall be valid for three years from the date of certification.

6.2.5 The District shall publish and maintain a list of certified emissions for the tested unit.

### 6.3 Compliance Report

6.3.1 The compliance report shall contain the following information:

6.3.1.1 General Information:

6.3.1.1.1 Name and address of manufacturer,

6.3.1.1.2 Brand name,

6.3.1.1.3 Model number, as it appears on the permanent nameplate, and

6.3.1.1.4 Description of the model being certified, including burner type and rated heat input capacity.

6.3.1.2 A report on the certification test specified in Section 6.2.3.

6.3.1.3 A signed and dated statement attesting, under penalty of perjury, to the accuracy of all statements and information in the compliance report.

6.4 Identification of Compliant Units

The manufacturer shall display the model number and the certification status, as determined in Section 6.1 and 6.2 of this rule, of an applicable unit on the permanent nameplate. If packaging obscures the permanent nameplate, the model number and certification status shall also appear on the packaging.

7.0 Compliance Schedule

On and after January 1, 2007, no person shall supply, sell, offer for sale, install or solicit the installation of a unit subject to this rule unless it meets the requirements of Section 5.1.